MA 24T(89)-1

READEX FICHE best copy available

CURRENT INDUSTRIAL REPORTS

Lumber Production and Mill Stocks

U.S. Department of Commerce
BUREAU OF THE CENSUS

1989

MA24T(89)-1
Issued August 1990

SUMMARY OF FINDINGS

This is the annual Current Industrial Report on lumber production and mill stocks. This report shows total United States lumber production and end-of-year inventories for 1989 and 1988. Production by state can be found in table 3, and production by lumber industry region is reported in table 5. Comparisons of U.S. production with imports and exports are shown in table 6.

The data in this report were collected from a sample of lumber mills. These figures represent total production and inventories for all U.S. sawmills. A description of the survey methodology and related information appears on page 8.

Table 1. LUMBER PRODUCTION: 1978 TO 1989

(Millions of board feet, lumber tally)

Year	Total	Softwood			Total hardwoods
		Total	Southern yellow pine	Other	
1989	43,576	36,040	12,031	24,009	7,536
1988	44,576	36,845	12,474	24,371	7,731
1987	44,886	37,410	12,043	25,367	7,476
1986	41,999	34,815	11,443	23,372	7,184
1985	36,445	30,479	10,230	20,249	5,966
1984	37,065	30,801	10,648	20,153	6,264
1983	34,553	28,926	10,180	18,746	5,627
1982	30,010	24,949	8,754	16,195	5,061
1981	31,672	25,420	8,415	17,005	6,252
1980	35,354	28,239	8,217	20,022	7,115
1979	40,570	33,255	9,283	23,972	7,314
1978	40,498	33,467	9,231	24,236	7,031

Note: Totals for 1986 include figures for approximately 200 sawmills that are included in this survey for the first time. As a result, totals for 1986 are not directly comparable to those for 1985 and earlier years. The new sawmills accounted for 1,917 million board feet in 1986, including 492 million board feet of southern yellow pine, 315 million board feet of other softwoods, and 1,110 million board feet of hardwoods. See "Description of Survey" in the text for an explanation of the sampling procedure.

Table 2. LUMBER MILL STOCKS: 1978 TO 1989

(Millions of board feet, lumber tally)

Year	Total mill stocks	Softwood	Hardwood	Relative error (percent)[1]			Relative error of difference (percent)[1]		
				Total	Softwood	Hardwood	Total	Softwood	Hardwood
1989	4,273	3,419	854	1	1	3	29	33	25
1988	4,540	3,611	929	2	3	3	1	33	20
1987	4,392	3,566	826	1	2	2	16	13	28
1986	4,584	3,679	905	1	2	4	15	8	37
1985	4,374	3,527	847	2	2	3	(NA)	(NA)	(NA)
1984	4,327	3,403	924						
1983	4,335	3,417	918						
1982	3,833	2,981	852						
1981	3,938	3,041	897	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1980	5,033	3,831	1,202						
1979	4,888	3,807	1,081						
1978	4,434	3,463	971						

See note at end of table 1.

(NA) Not available.

[1] A description of the relative error is given in the "Description of Survey." The percentages are the approximate relative standard errors of the estimates of level or of the difference (i.e., change) between annual estimates.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Beth Eldridge, (301) 763-7807.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

C 3.158:

Table 3. PRODUCTION OF SOFTWOODS AND HARDWOODS, BY CENSUS GEOGRAPHIC AREAS: 1989 AND 1988

(Millions of board feet, lumber tally)

Geographic area	Total		Softwoods		Hardwoods		Relative error (percent)[1]								
							Total			Softwoods			Hardwoods		
	1989	1988	1989	1988	1989	1988	1989	1988	Difference	1989	1988	Difference	1989	1988	Difference
United States	43,576	44,576	36,040	36,845	7,536	7,731	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Eastern United States	20,858	21,617	13,635	14,181	7,223	7,436	2	2	260	2	2	13	3	4	32
Alabama	1,896	2,063	1,660	1,748	236	315	2	2	16	1	1	3	6	10	33
Arkansas	1,490	1,491	1,193	1,239	237	252	2	6	91	2	6	119	6	6	15
Connecticut and Rhode Island	43	56	8	9	35	47	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Delaware and Maryland	153	171	70	75	83	96	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Florida	615	602	591	580	24	22	8	8	30	9	8	25	33	25	143
Georgia	2,850	2,719	2,612	2,506	238	r213	7	6	39	7	7	38	9	3	79
Illinois	103	r106	(Z)	(Z)	103	r106	28	27	43	-	63	78	28	27	42
Indiana	262	368	(D)	23	(D)	345	13	21	63	79	66	72	12	21	66
Iowa	49	r49	-	-	49	r49	9	7	124	-	-	-	9	7	124
Kansas and Nebraska	25	26	(Z)	(Z)	25	26	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Kentucky	426	440	14	18	412	422	11	9	360	49	54	242	10	8	449
Louisiana	737	816	604	659	133	157	1	1	2	-	-	3	6	6	1
Maine	714	776	638	698	76	r78	3	6	39	3	6	41	10	9	33
Massachusetts	85	86	61	60	24	26	3	4	584	4	2	134	9	9	13
Michigan	323	r314	59	r70	264	244	15	14	317	48	51	70	14	11	137
Minnesota	150	156	64	61	86	93	16	16	38	17	18	14	23	21	18
Missouri	385	387	27	32	358	355	19	18	1,971	38	39	105	19	19	1,104
Mississippi	2,208	2,168	1,773	1,738	435	430	1	1	28	-	-	7	7	6	256
New Hampshire	156	162	131	139	25	23	-	1	44	-	2	32	-	-	-
New Jersey	4	7	(D)	(D)	(D)	(D)	28	13	1	84	84	536	23	10	1
New York	305	294	54	50	251	244	8	7	92	16	12	179	8	7	104
North Carolina	1,364	1,705	1,019	1,141	345	564	6	6	13	3	2	7	16	16	74
Ohio	279	309	(D)	1	(D)	308	16	19	54	2	2	-	16	19	54
Oklahoma	236	r235	(D)	(D)	(D)	(D)	18	14	500	-	-	3	77	67	146
Pennsylvania	617	607	10	12	607	595	8	7	138	9	6	43	8	7	106
South Carolina	1,491	1,466	1,251	1,230	240	r236	7	7	91	5	5	106	34	32	197
Tennessee	677	716	116	133	561	r583	23	21	49	11	11	20	26	24	98
Texas	1,239	1,274	1,135	1,135	104	139	20	20	44	21	21	-	42	42	43
Vermont	124	137	59	74	65	63	12	12	11	18	17	17	13	13	61
Virginia	1,079	1,121	437	490	642	631	13	12	67	2	1	14	22	21	215
West Virginia	411	402	3	6	408	r396	9	9	101	10	48	92	9	9	61
Wisconsin	422	r391	46	r46	376	r345	8	9	14	4	3	320	9	10	13
Western United States	22,718	22,959	22,405	22,664	313	275	2	2	63	2	2	14	-	-	-
Alaska and Hawaii	(D)	(D)	(D)	(D)	1	(Z)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Arizona	439	435	439	435	-	-	-	-	-	-	-	-	-	-	-
California	4,673	4,872	(D)	(D)	(D)	(D)	-	-	-	-	-	-	-	-	-
Colorado	168	145	(D)	(D)	(D)	(D)	13	12	20	13	12	21	-	-	-
Idaho	2,265	2,135	2,265	2,135	-	-	-	-	-	-	-	-	-	-	-
Montana	1,597	1,653	1,597	1,653	-	-	7	10	69	7	10	69	-	-	-
Nevada and Utah	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
New Mexico	201	174	201	174	-	-	-	-	-	-	-	-	-	-	-
Oregon	8,326	8,313	8,246	8,240	80	73	5	4	561	5	4	121	-	-	-
South Dakota	193	192	193	192	(Z)	(Z)	-	-	27	-	-	28	26	24	-
Washington	4,341	4,500	4,114	4,300	227	200	3	2	10	3	3	9	-	-	-
Wyoming	302	301	302	301	-	-	23	24	260	23	24	260	-	-	-

See note at end of table 1.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. rRevised by 5 percent or more from previously published figures. (Z) Represents less than 500,000 board feet.

[1] A description of the relative error is given in the "Description of Survey." The percentages are the approximate relative standard errors of the estimates of level or of the difference (i.e., change) between annual estimates.

Table 4. LUMBER PRODUCTION, BY SPECIES: 1989 AND 1988

(Millions of board feet, lumber tally)

Product description	1989	1988	Relative error (percent)[1]		
			1989	1988	Difference
United States	43,576	44,576	(NA)	(NA)	(NA)
All Eastern species	20,858	21,617	2	2	260
Eastern softwoods	13,635	14,161	2	2	13
Pine, southern yellow	12,031	12,474	1	1	21
Pine, eastern white	389		12	(NA)	(NA)
Pine, other[2]	123		23	(NA)	(NA)
Spruce or fir[3]	361	1,687	1	(NA)	(NA)
Other eastern softwoods[4]	731		(NA)	(NA)	(NA)
Eastern hardwoods	7,223	7,456	3	4	32
Ash	278	293	5	6	44
Beech	105	120	9	8	24
Birch	98	89	14	6	139
Cherry	163	159	6	6	190
Cottonwood	101	96	13	12	107
Aspen	116	138	8	10	50
Gum, black, tupelo, and sweet	306	356	5	7	24
Hickory and pecan	187	225	20	18	24
Hard maple	353	362	6	6	51
Soft maple	236	257	4	5	31
Oak, red	2,409	2,599	4	4	34
Oak, white	1,137	1,191	6	6	51
Black walnut	65	77	25	23	193
Yellow poplar	802	828	6	6	51
Other eastern hardwoods[5]	538	666	9	8	27
Mixed hardwoods[6]	329	(NA)	13	(NA)	(NA)
All Western species	22,718	22,959	2	2	63
Western hardwoods	22,405	22,684	2	2	14
Cedar, western red	600		-	(NA)	(NA)
Cedar, other[7]	228	863	(NA)	(NA)	(NA)
Douglas fir	10,045	9,986	4	3	140
Fir, white, hemfir, and other[8]	3,296	2,919	4	4	4
Pine, ponderosa (western yellow)	3,914	3,940	3	4	147
Pine, western white	66		-	(NA)	(NA)
Pine, lodgepole	1,215	1,753	(NA)	(NA)	(NA)
Pine, sugar	332		-	(NA)	(NA)
Redwood	1,048	1,157	-	-	-
Spruce[9]	236		9	(NA)	(NA)
Other western softwoods[10]	1,425	2,066	(NA)	(NA)	(NA)
Western hardwoods[11]	313	275	-	-	-

See note at end of table 1.

- = Represents zero. (NA) Not available.

[1] A description of the relative error is given in the "Description of Survey." The percentages are the approximate relative standard errors of the estimates of level or of the difference (i.e., change) between annual estimates.

[2] Includes jack, and Norway (red) pines.

[3] Includes eastern red cedar, northern and southern white cedar, balsam fir, and eastern spruce.

[4] Includes hemlock, tamarack, and mixed woods not specified.

[5] Includes sycamore, basswood, cypress, elm, and woods not specified.

[6] Mixed hardwoods includes mixed, ungraded hardwoods sawn for ties, timbers, blocking cants, and a pallet shook.

[7] Includes Alaska, Port Orford, and Incense cedars.

[8] Prior to 1989, hemfir was included with other western softwoods. This category now includes white fir, hemfir, and other western true firs. Therefore, figures for 1988 and earlier years may not be compatible with those for 1989.

[9] Includes sitka and western/Engelman spruce.

[10] Includes hemlock, larch, mixed woods, and woods not specified.

[11] Includes alder, birch, cottonwood and aspen, maple, oaks, mixed woods, and woods not specified.

Table 5. PRODUCTION OF SOFTWOODS AND HARDWOODS, BY LUMBER INDUSTRY REGIONS: 1989 AND 1988

(Millions of board feet, lumber tally)

Lumber industry region[1]	Total		Softwoods		Hardwoods		Relative error (percent)[2]								
							Total			Softwoods			Hardwoods		
	1989	1988	1989	1988	1989	1988	1989	1988	Difference	1989	1988	Difference	1989	1988	Difference
United States	43,576	44,576	36,040	36,845	7,536	7,731	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Eastern lumber regions	20,858	21,617	13,635	14,161	7,223	7,456	2	2	260	2	2	13	3	4	32
Southern pine	12,031	12,474	12,031	12,474	-	-	1	1	21	1	1	21	(NA)	(NA)	(NA)
Southern hardwood	3,580	3,769	-	-	3,580	r3,769	7	7	35	(NA)	(NA)	(NA)	7	7	35
Appalachian	1,199	1,167	96	r75	1,103	1,092	14	13	75	43	23	167	9	8	322
Northern hemlock and hardwood	743	694	104	r108	639	586	8	8	61	28	33	177	8	7	49
Northeastern	2,040	2,105	859	1,032	1,081	1,073	3	3	44	3	4	35	5	5	231
Other	1,265	r1,408	445	r472	820	r936	7	9	48	17	13	13	8	11	56
Western lumber regions	22,718	22,959	22,405	22,684	313	273	2	2	63	2	2	14	-	-	-
Douglas fir	8,557	8,726	8,249	8,453	308	273	5	4	51	5	4	42	-	-	-
Western pine	12,120	12,046	12,118	12,042	2	2	1	1	50	1	1	51	3	4	-
California redwood	(D)	(D)	(D)	(D)	2	(Z)	-	-	-	-	-	-	-	-	-
Alaska and Hawaii	(D)	(D)	(D)	(D)	1	(Z)	-	-	-	-	-	-	-	-	-

See note at end of table 1.

Note: Data shown in this table represent all species of hardwood and softwood lumber produced in each lumber industry region. For example, lumber production in the Western pine region shown in this table includes all species produced in the region, which totaled 12,120 million board feet in 1989. Production of Western Pine lumber, as shown in table 4, totaled 5,527 million board feet in 1989.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. rRevised by 5 percent or more from previously published figures. (Z) Represents less than 500,000 board feet.

[1] For definitions of lumber industry regions, see text.

[2] A description of the relative error is given in the "Description of Survey." The percentages are the approximate relative standard errors of the estimates of level or of the difference (i.e., change) between annual estimates.

Table 6. PRODUCTION, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF SOFTWOODS AND HARDWOODS: 1989 AND 1988

(Millions of board feet)

Product code	Product description	Production	Exports of domestic merchandise[1]	Percent exports to manufacturers' production	Imports for consumption[1]	Apparent consumption[2]	Percent imports to apparent consumption
	1989						
	Softwoods	38,[illegible]	3,[illegible]	9.2	14,840	47,553	31.2
	Pine	18,070	924	5.1	1,573	18,719	8.4
24212 74	Lodgepole pine	1,215	192	15.8	300	1,323	22.7
24212 71	Ponderosa pine (western yellow pine)	3,914	158	4.0	25	3,781	0.7
24212 14, 24212 16, 24212 17, 24212 72, 24212 76	Other pine, including southern yellow pine and eastern white pine	12,941	573	4.4	1,247	13,615	9.2
24212 18, 24212 78, 24212 80, 24212 66	Spruce and fir (other than douglas fir)	3,893	439	11.3	11,005	14,458	76.1
24212 63	Douglas fir	10,045	1,111	11.1	687	9,621	7.1
24212 60	Western red cedar	600	36	6.0	724	1,288	56.2
24212 20, 24212 62, 24212 79	Other softwoods, including hemlock and other cedars	3,432	818	23.8	852	3,466	24.6
	Hardwoods	7,536	810	10.8	234	6,960	3.4
24211 51	Ash	278	87	31.5	1	191	0.5
24211 53	Beech	105	15	14.6	1	90	0.7
24211 55	Birch	98	5	5.6	16	109	15.1
24211 57	Cherry	163	15	9.0	1	149	0.5
24211 65	Hickory and pecan	187	4	2.3	(Z)	183	-
24211 67, 24211 69	Maple	589	54	9.2	25	560	4.4
24211 71	Red Oak	2,409	277	11.5	5	2,137	0.3
24211 73	White Oak	1,137	191	16.8	2	948	0.2
24211 75	Walnut	65	13	20.7	(Z)	52	-
24211 77	Yellow poplar	802	37	4.6	6	771	0.8
24211 59, 24211 61, 24211 63, 24211 79, 24211 99	Other hardwoods, including cottonwood, aspen, and gum	1,703	111	6.5	177	1,769	10.0
	1988						
	Softwoods	36,845	3,228	8.8	13,449	47,066	28.6
24212 63	Douglas fir	9,986	889	8.9	721	9,818	7.3
24212 65	Other fir	2,919	259	8.9	607	3,267	18.6
24212 14, 24212 71, 24212 73	Pine	18,167	998	5.5	333	17,502	1.9
24212 61	Cedar	863	89	10.3	787	1,561	50.4
24212 15, 24212 75, 24212 79	Other	4,910	993	20.2	11,001	14,918	73.7
24211 **	Hardwoods	7,731	1,170	15.1	334	6,895	4.8

Note: For a comparison of SIC-based product codes, Schedule B export numbers, and HTSUSA import numbers, see table 7.

** Represents a combination of codes. (Z) Represents less than 500,000 board feet.

[1] The harmonized import and export figures for 1989 were collected in cubic meters. A conversion factor of 0.423729 was used to convert from cubic meters to thousand board feet.

[2] Apparent consumption is equal to production plus imports minus exports.

Table 7A. COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASED PRODUCT CODES WITH SCHEDULE B EXPORT NUMBERS, AND HTSUSA IMPORT NUMBERS: 1989

Product code	Product description	Export number[1]	Import number[2]
24212 74	Lodgepole pine	4407.10.0023	4407.10.0023
		4407.10.0024	4407.10.0024
24212 71	Ponderosa pine (western yellow pine)	4407.10.0027	4407.10.0027
		4407.10.0028	4407.10.0028
24212 14 24212 16 24212 17 24212 72 24212 76	Other pine, including southern yellow pine and eastern white pines	4407.10.0021	4407.10.0021
		4407.10.0022	4407.10.0022
		4407.10.0025	4407.10.0025
		4407.10.0026	4407.10.0026
		4407.10.0029	4407.10.0029
		4407.10.0030	4407.10.0030
24212 18 24212 78 24212 80 24212 66	Spruce and fir (other than Douglas fir)	4407.10.0010	4407.10.0010
		4407.10.0011	4407.10.0011
		4407.10.0035	4407.10.0035
		4407.10.0036	4407.10.0036
24212 63	Douglas fir	4407.10.0031	4407.10.0031
		4407.10.0032	4407.10.0032
		4407.10.0033	4407.10.0033
		4407.10.0034	4407.10.0034
24212 60	Western red cedar	4407.10.0060	4407.10.0060
		4407.10.0061	4407.10.0061
24212 20 24212 62 24212 79	Other softwoods, including hemlock and other cedars	4407.10.0040	4407.10.0040
		4407.10.0041	4407.10.0041
		4407.10.0050	4407.10.0050
		4407.10.0051	4407.10.0051
		4407.10.0070	4407.10.0070
		4407.10.0071	4407.10.0071
		4407.10.0090	4407.10.0090
		4407.10.0091	4407.10.0091
24211 51	Ash	4407.99.0065	4407.99.0065
		4407.99.0066	4407.99.0066
24211 53	Beech	4407.92.0020	4407.92.0020
		4407.92.0040	4407.92.0040
24211 55	Birch	4407.99.0050	4407.99.0050
		4407.99.0051	4407.99.0051
24211 57	Cherry	4407.99.0040	4407.99.0040
		4407.99.0041	4407.99.0041
24211 65	Hickory and pecan	4407.99.0070	4407.99.0070
		4407.99.0071	4407.99.0071
24211 67 24211 69	Maple	4407.99.0020	4407.99.0020
		4407.99.0021	4407.99.0021
		4407.99.0025	4407.99.0025
24211 71	Red Oak	4407.91.0020	4407.91.0020
		4407.91.0021	4407.91.0021
24211 73	White Oak	4407.91.0060	4407.91.0060
		4407.91.0061	4407.91.0061
24211 75	Walnut	4407.99.0075	4407.99.0075
		4407.99.0076	4407.99.0076
24211 77	Yellow poplar	4407.99.0045	4407.99.0045
		4407.99.0046	4407.99.0046
24211 59 24211 61 24211 63 24211 79 24211 99	Other hardwoods, including cottonwood, aspen, and gum	4407.99.0030	4407.99.0030
		4407.99.0031	4407.99.0031
		4407.99.0090	4407.99.0090
		4407.99.0095	4407.99.0095

[1]Source: 1989 edition, Harmonized System-Based Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States.
[2]Source: Harmonized Tariff Schedule of the United States, Annotated (1989).

Table 7B. COMPARISON OF PRODUCT CODES (DOMESTIC OUTPUT), SCHEDULE B EXPORT NUMBERS, AND TSUSA IMPORT NUMBERS: 1988

Product description	Domestic output	Import number	Export number
Douglas fir	24212 63	202.1520 to 202.1540	202.1620 to 202.1680
Other fir	24212 65	202.1820 to 202.1840	202.1920 to 202.1940
Pine	24212 14	202.0620 to 202.0640	202.0720 to 202.0740
	24212 71	202.0925 to 202.0985	202.0820 to 202.0840
	24212 73	202.1220 to 202.1240	202.1020 to 202.1040
			202.1120 to 202.1140
Cedar	24212 61	202.2720 to 202.2780	202.2820 to 202.2880
Other softwood	24212 13	202.0320 to 202.0340	202.0420 to 202.0440
	24212 75	202.2120 to 202.2140	202.2220 to 202.2240
	24212 79	202.2420 to 202.2440	202.2520 to 202.2540
		202.3020 to 202.3040	202.2920 to 202.2940
			202.3120 to 202.3140
Total hardwood	24211 51		
	24211 53		
	24211 55		
	24211 57		
	24211 59	202.3205 to 202.3215	
	24211 61	202.3305 to 202.3315	202.4312 to 202.4315
	24211 63	202.3420 to 202.3440	202.4320 to 202.4325
	24211 65	202.3500 to 202.3700	202.4330 to 202.4335
	24211 67	202.3820 to 202.3840	202.4340 to 202.4345
	24211 69	202.4020 to 202.4040	202.4360 to 202.4365
	24211 71	202.4210 to 202.4270	202.4370 to 202.4375
	24211 73	202.4400, 202.4600	202.5740
	24211 75		
	24211 77		
	24211 79		
	24211 99		

Source: Bureau of the Census reports FT 446, U.S. Exports and FT 246, U.S. Imports for Consumption.

DESCRIPTION OF SURVEY

Scope of Survey. This survey covers sawmills producing lumber, sawed ties, and timbers, whether sawed for own use, sawed on contract for others, custom sawed, or sawed for sale.

Survey Methodology. The statistics in this publication represent total production of lumber by all manufacturers. These figures were collected on Bureau of the Census annual Form MA24T, Lumber Production and Mill Stocks.

Figures for 1984 and later years are based on a sample of approximately 2,700 establishments. This panel was selected from a sampling frame composed of establishments that were included in the 1982 Census of Manufactures or that began operation after 1982, plus a number of sawmills identified by secondary sources such as the U.S. Forest Service, lumber grading agencies, and trade associations. The probability of selection depended upon the total employment of the establishment, the state in which the establishment operates, and the quantity and species produced. All sawmills with 20 or more employees were automatically included in the sample. Below this cutoff, probability of selection varied proportionately with quantity of lumber produced, within each state and species.

For 1986, a supplemental sample of about 200 establishments was added to this survey. These establishments were selected from some 1,200 sawmills that did not have a chance for selection in the 1984 sample. Most of these opened after the original sample was selected, or were not identified when the sampling frame was assembled. In addition to the added establishments, 130 sawmills from the supplemental sampling frame were selected but not added because they were out of scope of the survey or were no longer in business.

Reliability of Data. The estimates of level of production derived from the sample may differ somewhat from the results of a complete coverage survey. The sampling errors of the level estimates—the differences between the sample estimates of levels and the results theoretically obtainable from a comparable complete coverage survey—are not known but can be approximated by the standard errors of the estimates. Sampling errors of the differences between the two level estimates can also be approximated. Standard errors of the current year estimates, the prior year estimates, and the difference between the current year and prior year estimates are presented in tables 2-5.

The standard errors are presented as relative standard errors; that is, as the standard errors of the estimates of level or difference divided by the estimates themselves. The sample estimate and its associated relative standard error may be used to define confidence intervals expressed in the form of the sample estimate plus or minus some constant times the estimated relative standard error. For example, suppose the estimated total is 5,000 with an associated relative standard error of 2 percent. Then the standard error is 100 (2 percent of 5,000), and the chances are approximately two out of three that the complete coverage total would be between 4,900 and 5,100 (estimate ± one relative standard error); the chances are approximately 19 out of 20 that the complete coverage total would be between 4,800 and 5,200 (estimate ± two relative standard errors); and it is almost certain that the complete coverage total would be between 4,700 and 5,300 (estimate ± three relative standard errors).

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail logic edits. ("Bias", as used here, refers to differences between the true value and the estimated value.) Missing figures for establishments are imputed based on yearly movements shown by firms reporting both years. Missing figures for new panel establishments not included in the old sample are estimated based on employment size. Imputation generally is limited to a maximum of 30 percent for any one data cell. Figures with imputation rates greater than 30 percent are footnoted.

The coverage and imputation rates are not explicit indicators of the potential error in published figures due to nonresponse because the actual yearly movements for nonrespondents may or may not closely agree with the estimated movements. The range of difference between the actual and estimated figures is not precisely known but is assumed to be small. The degree of uncertainty regarding the accuracy of the published data increases as the percentage of estimation increases. Figures with coverage rates below 70 percent, or imputation rates above 30 percent, should be used with caution.

In addition to sampling error, and errors resulting from estimation for firms that were not canvassed, the results of this survey are subject to several sources of nonsampling errors. These include: (1) inability to obtain information about all cases in the survey; (2) response errors; (3) definitional difficulties; (4) differences in the interpretation of questions; (5) mistakes in recording or coding the data obtained, and (6) other errors of collection, response, coverage, and estimation for missing data. These nonsampling errors also occur in complete censuses. Although no direct measurement of the biases due to nonsampling has been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize their influence.

EXPLANATION OF TERMS

Production. Total quantity for each type of species of lumber, sawed ties, and timbers, in thousand board feet for the species indicated. Materials sawed from bolts less than 6 feet long or materials sawed from slabs, edging, etc., are not included.

Stocks on Hand. Stocks of lumber on hand on December 31, whether sold or unsold, including rough, finished, green, and dry lumber on hand.

LUMBER INDUSTRY REGIONS

Eastern Lumber Regions

Southern Pine:

All southern yellow pine.

Southern Hardwood:

All hardwoods in Missouri, Arkansas, Oklahoma, Texas, Louisiana, Mississippi, Alabama, Florida, Delaware, and the lowland counties of Maryland, Virginia, North Carolina, South Carolina, Georgia, Tennessee, and Kentucky.

Appalachian:

All hardwoods and softwoods, except southern yellow pine, in West Virginia, and Appalachian range counties of Maryland, Virginia, North Carolina, South Carolina, Georgia, Tennessee, and Kentucky.

Northern Hemlock and Hardwood:

All hardwoods and softwoods, except southern yellow pine in Michigan and Wisconsin.

Northeastern:

All hardwoods and softwoods, except southern yellow pine, in Connecticut, Maine, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, and Vermont.

Other:

All hardwoods and softwoods in Minnesota, Ohio, Indiana, Illinois, Iowa, North Dakota, Nebraska, Kansas, District of Columbia, New Jersey; and all softwoods except southern yellow pine in Missouri, Delaware, Florida, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

Western Lumber Regions

Douglas Fir:

All softwoods and hardwoods in Washington and Oregon west of the Cascades, and in Jackson and Josephine counties in Oregon.

Western Pine:

All softwoods and hardwoods in Washington and Oregon east of the Cascades, in California (except the counties listed in the Redwood Region), and in Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, South Dakota, Utah, and Wyoming.

California Redwood:

All softwoods and hardwoods in the following 11 counties of California: Alameda, Contra Costa, Del Norte, Humboldt, Marin, Mendocino, Monterey, San Francisco, San Mateo, Santa Cruz, and Sonoma.

Alaska and Hawaii:

All softwoods and hardwoods in the States of Hawaii and Alaska have been included in the Lumber Industry Region tables of this publication to maintain consistency with the estimates shown for the total United States.

COMPARISON OF EXPORT, IMPORT, AND DOMESTIC OUTPUT DATA

The trade comparisons shown in this report should be considered only as approximations. Several problems prevent precise comparisons among imports, exports, and domestic output. These problems include the following:

- Export and import comparisons do not account for the origin of materials used to manufacture the finished product. Domestic output includes any goods that undergo substantial transformation into a finished product in the U.S., even if the goods are partially constructed abroad or are constructed of imported materials.
- There will be a lag between the time a producer makes or ships a product and the time it is actually exported. Similarly, there may be a lag between the time a product is imported and when it enters into U.S. distribution channels.
- The basic structure of these classification systems differ. The Standard Industrial Classification (SIC) system used for domestic output was developed independently of the Harmonized System (HS) used to classify imports and exports. The level of detail provided by the different systems varies substantially, reflecting their different objectives. For example, there are a number of imported commodities that have no comparable domestic output classification.
- Because producers' shipments of some commodities may be used as materials for incorporation into other commodities, combinations of domestic output data for such commodities may contain some duplication.
- Import and export data reflect the movement of merchandise into and out of U.S. foreign trade zones, the U.S. Virgin Islands, and the U.S. customs territory of

the 50 States, the District of Columbia, and Puerto Rico. Domestic output reflects activity in the 50 States and, only if specified, in Puerto Rico.

- Import and export data generally do not distinguish between new, used or rebuilt commodities.
- The valuation of the three data sets differ. Domestic output is valued at the point of production. It includes the net sales price, f.o.b. plant, after discounts and allowances, and excludes freight charges and excise taxes. Exports are valued at the point of exportation. It includes the net sales price or value, and inland freight, insurance and other charges to the export point. Imports are valued at the first port of entry in the United States. They include the cost, insurance, freight, duty, and other charges to the import point.
- Detailed commodity information is not included for individual export or import shipments at or below a certain dollar limit. This dollar limit is $1,500 for exports and $1,000 for imports, except for import of textiles and textile products, gloves, footwear, and miscellaneous rubber and plastics products, where the limit is $250.

HISTORICAL NOTE

Data on lumber production and stocks have been collected by the Bureau of the Census since 1904. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library. A list of these libraries may be obtained from the Bureau of the Census regional offices:

Office	Telephone
Atlanta, Georgia	(404) 347-2271
Boston, Massachusetts	(617) 565-7100
Charlotte, North Carolina	(704) 371-6142
Chicago, Illinois	(312) 353-6251
Dallas, Texas	(214) 767-0621
Denver, Colorado	(303) 286-2200
Detroit, Michigan	(313) 226-7742
Kansas City, Kansas	(913) 236-3728
Los Angeles, California	(213) 209-6616
New York, New York	(212) 264-3860
Philadelphia, Pennsylvania	(215) 597-4920
Seattle, Washington	(206) 442-7800

Historical data are also available on microfiche. For further information contact the Bureau of the Census, Data User Services Division, (301) 763-4100.

RELATED REPORTS

The Bureau of the Census also publishes the following related reports:

Series	Frequency	Title
Current Industrial Reports		
MA24F	Annually	*Plywood and OSB*
Other Industry Reports		
M3-1	Monthly	*Manufacturers' Shipments, Inventories, and Orders*
(AS)	Annually	Annual Survey of Manufactures (ASM)
(MC)	Quinquennially	Census of Manufactures
Foreign Trade Reports		
EM 522 FT 446	Monthly Annually	*U.S. Exports—Schedule B—Commodity by Country*
IM 146 FT 145	Monthly Annually	*U.S. Imports for Consumption—HTSUSA—Commodity by Country*

CONTACTS FOR DATA USERS

Subject Area	Contact	Phone Number
Current Industrial Report MA24T	Beth Eldridge	(301) 763-2414
Classification Systems Comparability	Francis McCormick (ESD)	(301) 763-1935
Foreign Trade	Trade Data Inquiries Staff (FTD)	(301) 763-5140
Census/ASM	Allen Foreman	(301) 763-5531
International Trade Administration	Barbara Wise	(202) 377-0377
Department of Agriculture	Bob Phelps	(202) 447-5016
To order a Current Industrial Report	Superintendent of Documents (GPO)	(202) 783-3238
To subscribe to a Census Bureau publication	Superintendent of Document (GPO)	(202) 275-3054

ACKNOWLEDGMENTS

This report was prepared in the Industry Division, Bureau of the Census, under the direction of Tom Flood, Chief, Current Nondurables Branch, and Nathaniel Shelton, Chief, Wood and Chemicals Section. Beth Eldridge

was directly responsible for the review of the data and preparation of the report. Gaylord E. Wordon, Chief, of the Division, and Robert N. Tinari, Assistant Chief for Current Industrial Reports, provided overall direction and coordination to this project.

U.S. Department of Commerce
BUREAU OF THE CENSUS
Washington, D.C. 20233

Official Business
Penalty for Private Use, $300

FIRST-CLASS MAIL
POSTAGE & FEES PAID
CENSUS
PERMIT No. G-58